



PATENT ABSTRACTS OF JAPAN

(11) Publication number: **10326790 A**(43) Date of publication of application: **08.12.98**

(51) Int. Cl.

H01L 21/324**C30B 29/06****H01L 21/02****// H01L 21/316**(21) Application number: **10082606**(22) Date of filing: **13.03.98**(30) Priority: **27.03.97 JP 09 92952**(71) Applicant: **SHIN ETSU HANDOTAI CO LTD**(72) Inventor: **KOBAYASHI NORIHIRO
OKA TETSUSHI
ABE TAKAO****(54) METHOD FOR HEAT-TREATING SILICON
WAFER AND SILICON WAFER**

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a heat-treating method by which, particularly, the COP density and the occurrence of a micro defect which becomes the core of an oxidization-induced lamination defect can be reduced on the surface of a silicon wafer for heat-treating the silicon wafer in a reducing atmosphere by using a device which can quickly heat and cool the silicon wafer.

SOLUTION: In a method for heat-treating silicon wafer, a

silicon wafer is heat-treated in a reducing atmosphere by using a device which can quickly heat and cool the silicon wafer. During the course of the heat treatment, the silicon wafer is heat-treated for 1-60 seconds within a temperature range from 1,200°C to a temperature equal to or lower than the melting point of silicon. It is preferable to form the reducing atmosphere to a 100% hydrogen atmosphere or a mixed hydrogen-argon atmosphere and to adjust the heat-treating time to 1-30 seconds.

COPYRIGHT: (C)1998,JPO